

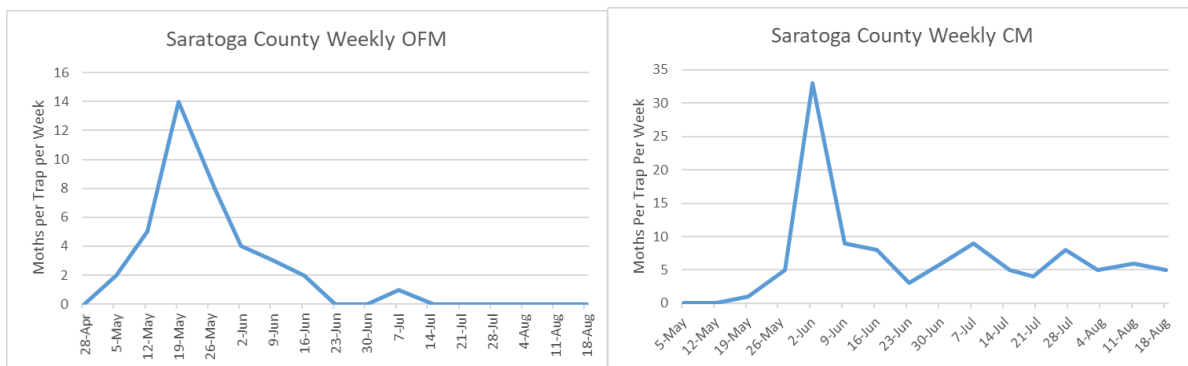
## Late Season Pest Considerations

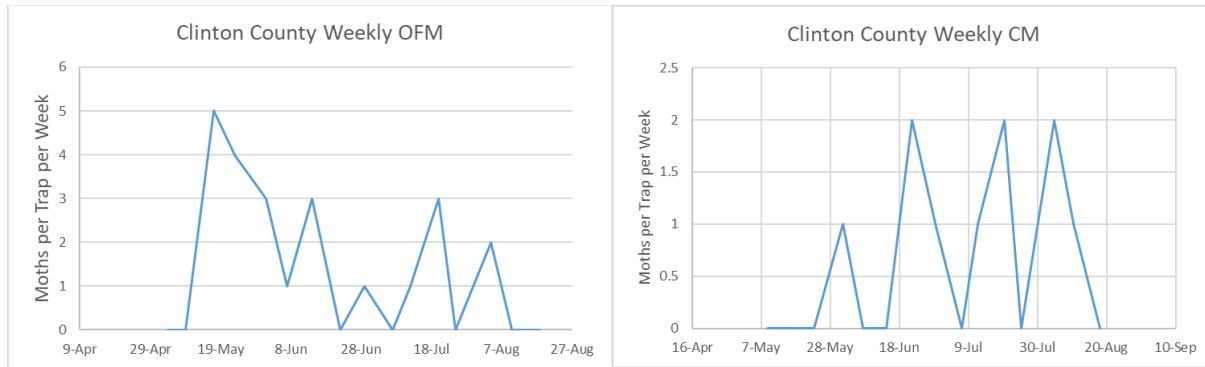
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With the start of harvest, there are just a few remaining insect pest management issues to keep in mind.

The primary concern at this point should be **internal leps**. With labor concerns and a good crop, fruit may hang on the trees longer than originally thought, and it is important to stay vigilant to protect the crop. There is usually a third "flight" of codling moth, which normally doesn't result in larval populations of any consequence, but this year's extended stretch of favorable temperatures may carry that generation's development further than normal.

Therefore, to be cautious, we shouldn't rule out the possibility that blocks with a history of internal worm problems might need a last-minute application of an appropriate-length PHI material to help stave off the final feeding injury caused by young larvae. Before the harvest period begins in earnest, a fruit examination could help determine whether the last brood of any of the likely species needs a final deterrent before the sprayer is put away. Potential choices (and PHIs) include Altacor (5/10 days, pome/stone fruits, respectively), Assail (7 days), a B.t. (0 days), Delegate (1 day, peaches; 7 days, apples/pears/plums), Exirel (3 days), Besiege (21/14 days, pome/stone fruits, respectively), Minecto Pro (28/21 days, pome/stone fruits, respectively), a pyrethroid (PHI varies), or a sprayable pheromone (0 days), as applicable.





**Weekly season long OFM and CM captures in our Saratoga and Clinton county trapping sites.**

**Apple maggot** adults are continuing to emerge in portions of ENY. Should they be needed, possible late-season options include Assail, Imidan (both 7 days), Altacor (5 days), Avaunt (14 days), Delegate (7 days), Exirel (3 days), and various premixes and pyrethroids.

**Stink bugs** - Keep an eye on your traps and trees on the orchard perimeter to prevent late season fruit damage. You can use either black pyramid or clear sticky panel traps; the clear sticky panel traps are less costly and easier to install/remove/scan. A 10 adult per trap threshold has been determined for black pyramid traps. There isn't a clear threshold for clear panels, but it appears to be much lower than the black pyramids (<5).

When thresholds are exceeded, or stink bugs become visible along the orchard edge, applications should begin. Border-row applications should be the first line of defense, followed by alternate-row applications, and finally whole orchard applications. Whole-orchard applications should be made if nymphs are found further within the orchard. Review your options carefully with regards to harvest dates, PHIs, re-application intervals, and seasonal a.i. amount maximums. Typically for BMSB, pyrethroid insecticides work best. Brigade 2EC and Brigade WSB were approved for statewide registration in New York in 2022. Both have been approved for use on apple against stink bugs and other apple pests. **Please note, while other bifenthrin containing insecticides may be on the market as generic formulations, Brigade 2EC and Brigade WSB are the only two we currently know that are registered statewide for BMSB on apple. Other products have not been registered for this use at this time. As always, check the label before use to make sure.** Other management options can be found in the Cornell Guidelines. These other products consist mostly of the pyrethroids or some pre-mix products. Most of these products are rated as moderate efficacy. A full list of materials is available on pages 149 and 150 of the Cornell Tree Fruit Guidelines.



Clear panel trap used for catching stink bugs. Photo by Steve Schoof, NCSU.



External (left) and internal (right) damage to apple fruits due to BMSB feeding. Photo by Douglas C. Pfeiffer, Virginia Tech.

A couple of less common last-minute pests can surface in certain cases. One is **western flower thrips**, particularly in nectarines growing in drought-stressed areas. Adults move from alternate weed or crop hosts to fruit just prior to and during harvest, feed on the fruit surface in protected sites, such as in the stem end, the suture, under leaves and branches, and between fruits. This results in silver stipling or patches; injury is particularly obvious on highly colored varieties. An application of Delegate or Entrust immediately before the first harvest may prevent subsequent losses; however, an additional application may be needed if pressure is severe. The PHI varies from 1 day (peaches and nectarines) to 7 days (plums and prunes) to 14 days (apricots). Other options include Besiege, Endigo, and Voliam Flexi.



**Western flower thrips adult. Photo by E. Beers.**

The **black stem borer** ambrosia beetle can still be found playing out its final few weeks of flight, although the literature indicates that this brood is probably not responsible for new infestations, so any direct treatments for this species probably should be deferred until next spring. However, it's not too early to begin removing any dead and dying trees having confirmed infestations, to eliminate them as a potential source of attacks next year. Pull out the roots as well, and burn all affected wood.

Another season-end problem that may deserve consideration now is **pearleaf blister mite**, a sporadic pest of pears that shows up in a limited number of commercial pear orchards and is a fairly common problem in home plantings. The adults are very small and cannot be seen without a hand lens; the body is white and elongate oval in shape, like a tiny sausage. The mite causes three distinct types of damage. During winter, the feeding of the mites under the bud scales is believed to cause the bud to dry and fail to develop. This type of damage is similar to and may be confused with bud injury from insufficient winter chilling. Fruit damage is the most serious aspect of blister mite attack. It occurs as a result of mites feeding on the developing pears, from the green-tip stage through bloom, causing russet spots. These spots, which are

often oval in shape, are usually depressed with a surrounding halo of clear tissue. They are 1/4–1/2 inch in diameter and frequently run together. A third type of injury is the blistering of leaves (Fig. 2); blisters are 1/8–1/4 inch across and, if numerous, can blacken most of the leaf surface. Although defoliation does not occur, leaf function can be seriously impaired by a heavy infestation.



**Leaf damage caused by pearleaf blister mites. Photo by Art Agnello.**

For those plantings that might be suffering from this errant pest, a fall spray is recommended sometime in early October, when there is no danger of frost for at least 24–48 hr after the spray. Options include Sevin XLR Plus (1.5–3 qt/A) or 80S (1.88–3.75 lb/A); alternatively, next spring during the dormant period you can use Diazinon 50WP (1 lb/100 gal) plus 1–1.5% oil.

## **Looking for More Tree Fruit IPM Resources?**

For additional **apple IPM** information, we highly recommend reviewing the videos available at <https://www.youtube.com/playlist?list=PLoNb8IODb49vifrm9Tla4GmAVhIIL0527>

For **stone fruit IPM** information, visit our video playlist on Youtube at [https://www.youtube.com/playlist?list=PLk2Q-bw9Aiu5NUJa7Iwl\\_Obs1V5-RSUGb](https://www.youtube.com/playlist?list=PLk2Q-bw9Aiu5NUJa7Iwl_Obs1V5-RSUGb)